



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,278	12/15/2004	Carl Christensen	PU020290	6691

7590 03/01/2010
Joseph S Tripoli
Thomson Licensing Inc
P O Box 5312
Princeton, NJ 08543-5312

EXAMINER

RUTKOWSKI, JEFFREY M

ART UNIT	PAPER NUMBER
----------	--------------

2473

MAIL DATE	DELIVERY MODE
-----------	---------------

03/01/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/518,278	Applicant(s) CHRISTENSEN, CARL	
	Examiner JEFFREY M. RUTKOWSKI	Art Unit 2473	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8 and 10-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5,6,13 and 14 is/are allowed.
- 6) ☒ Claim(s) 1-4,8,10-12,15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 7 and 9 have been cancelled.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114.

Applicant's submission filed on 01/26/2010 has been entered.

Allowable Subject Matter

2. **Claims 5-6 and 13-14** are allowed because the cited prior art does not teach or suggest the selective application of multiple or redundant reference signals (see lines 9-11 of claim 5).

3. **Claims 8, 10 and 15-16** would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

4. The indicated allowability of **claims 1-4 and 11-12** is withdrawn in view of the newly discovered reference(s) to Watanabe et al. (JP 2000-049841), hereinafter referred to as Watanabe. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 8, 10 and 15-16** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

Art Unit: 2473

applicant regards as the invention. The “if” conditions on lines 5-8 of **claim 8** renders the claims indefinite because it is not clear if reference signals are applied to both inputs. For example, it is not clear what happens if the user desires to not have the broadcast router operate with redundant or multiple reference signals.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. **Claims 1-2** are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art, hereinafter referred to as the APA, in view of Cooper et al. (US Pat 5,550,594), hereinafter referred to as Cooper and Watanabe.

10. For **claim 1**, the APA discloses *a first reference input and a second reference input* (broadcast routers having multiple reference inputs are well-known in the art; see page 2 line 5).

11. The APA discloses a selection circuit that selects input audio signals (see page 1 lines 20-25). The APA also discloses a broadcast router needs at least one reference input (see page 1

Art Unit: 2473

line 24). The APA does not disclose the use of a reference select circuit. Watanabe discloses *a reference select circuit* (item 1102 of drawing 10). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a reference select circuit in the APA to make use of a conventional selector for selecting reference inputs in the form of clock signals (see paragraph 0005).

12. The combination of the APA and Watanabe suggests *a reference select circuit coupled to said first and second reference inputs* (the selector **1102** receives the clocking signals from an external source; see drawing 9 of Watanabe); *and at least one router component coupled to said reference select circuit* (the clock signals are distributed to other components; see paragraph 0005 and drawings 9-10 of Watanabe).

13. The combination of the APA and Watanabe discloses reference select circuits that receive more than one *input reference signal* and outputs more than one *reference signal* is well-known (see paragraph 0005 of Watanabe). The combination of the APA and Watanabe does not disclose a selection circuit that passes one signal in lieu of another error-free signal. Cooper teaches a selection circuit that passes an input signal as a reference signal when the reference signal has encountered an error, namely the reference signal is missing (see col. 16 lines 25-28). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Cooper's selection circuit in the APA to provide an adjustable way to synchronize signals by allowing a clocking signal to come from more than one source (Cooper, col. 4 lines 30-40).

14. The combination of the APA, Watanabe and Cooper discloses *wherein said reference select circuit* (selector **1102** of Watanabe): *(1) passes a first signal applied to said first reference input to said at least one router component as a first reference signal and a second signal*

Art Unit: 2473

*applied to said second reference input to said at least one router component as a second reference signal in response to determining that said first and second signals are error-free (the selector **1102** chooses more than one clock signal; see paragraph 0005 of Watanabe); (2) passes said first signal to said at least one router component as said first reference signal and as said second reference signal in response to determining that said first signal is error-free and said second signal is not error-free (any missing reference signal is replaced by a different input reference signal; see col. 16 lines 25-28 of Cooper); and (3) passes said second signal to said at least one router component as said first reference signal and as said second reference signal in response to determining that said first signal is not error-free and said second signal is error-free (any missing reference signal is replaced by a different input reference signal; see col. 16 lines 25-28 of Cooper; see col. 16 lines 25-28 of Cooper).*

15. For **claim 2**, the APA discloses *wherein said at least one router component further comprises a router matrix* (see page 1 lines 20-25).

16. **Claims 3 and 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over the APA in view of Watanabe and Cooper as applied to **claim 1** above and further in view of Lydon et al. (US Pat. 6,680,939), hereinafter referred to as Lydon.

17. For **claims 3 and 4**, the combination of the APA, Watanabe and Cooper does not disclose the use of transmit or receive expansion ports. Lydon discloses the use of multiple expansion conductors (ports) in a matrix switch core with a large number of inputs and outputs [**col. 4 lines 45-48 and figure 3**] (claim 3: wherein said at least one router component further comprises a transmit expansion port; claim 4: wherein said at least one router component further comprises at least one receive expansion port). It would have been obvious to a person of ordinary skill in the

Art Unit: 2473

art at the time of the invention to use input and output expansion ports in the APA to avoid collisions at the switch core.

18. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over the APA in view of Watanabe and Cooper as applied to **claim 1** above, and further in view of Watanabe et al. (US Pg Pub 2002/0031148), hereinafter referred to as Watanabe '148.

19. For **claim 11**, the combination of the APA, Watanabe and Cooper disclose independent or redundant reference signals are well-known in the art (see page 2 lines 5-15 of the APA). The combination of the APA, Watanabe and Cooper does not disclose the reception of independent or redundant reference signals without modification of the reference inputs. Watanabe '148 disclose a hardware structure that operates on independent or redundant clock signals (reference signals) [**Watanabe '148, figure 1**]. Additionally, Watanabe's selector allows the router to operate without having to make modifications at the hardware level. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Watanabe '148's circuit in the APA to allow for different sources to be used as a clocking signal [**Watanabe '148, 0008-0009**].

20. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over the APA in view of Watanabe and Cooper, as applied to **claim 1** above, and further in view of Bytheway ("Is Your Plant Infrastructure Up to Handling Multichannel Digital Audio").

21. For **claim 12**, the combination of the APA, Watanabe and Cooper does not disclose a the alignment of more than one signal to a reference signal. Bytheway discloses a situation where two different signals, arriving at different times, are aligned to the same reference window [**page 4, 1st paragraph of the 2nd column**]. Bytheway's invention locks (a non-continual manner)

Art Unit: 2473

audio sources to a common reference input [**page 2 1st paragraph of Synchronization and Phasing**]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to align two different signals to a reference signal in the APA invention to conform to an AES standard [**Bytheway, page 3 AES- 1997 – Quick Summary**].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY M. RUTKOWSKI whose telephone number is (571)270-1215. The examiner can normally be reached on Monday - Friday 7:30-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey M Rutkowski/
Examiner, Art Unit 2473

Application/Control Number: 10/518,278

Page 8

Art Unit: 2473

/Hanh Nguyen/

Primary Examiner, Art Unit 2473